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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,556	07/29/2003	Andreas Eleftheriou	9-2993-486US	1804
32292 7590 05/01/2007 OGILVY RENAULT LLP (PWC) 1981 MCGILL COLLEGE AVENUE SUITE 1600 MONTREAL, QC H3A 2Y3 CANADA			EXAMINER KIM, TAE JUN	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 05/01/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/628,556

Applicant(s)

ELEFThERIOU ET AL.

Examiner

Ted Kim

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date : 4/12/06, 7/13/06, 12/22/06, 1/21/05.

DETAILED ACTION

Reopening of Prosecution

1. In order to address applicant's concerns brought up in the appeal brief of 12/22/2006, new art is cited below and the finality of the rejection of the last Office action is withdrawn.

Claim Interpretation

2. Applicant's definitions of "integral", "integrally" and "integrated" are used when applying the art below.

"[0014] It should be noted that the terms of "integral", "integrating" and "integrated" used throughout the text of this application and appended claims, are intended to mean items which are integrally joined such that disassembly (in a typical non-destructive sense) is not possible."

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Cronstedt (3,814,549). Cronstedt teaches a casing for a turbofan engine, the engine including at least a fan assembly 92, a compressor assembly 28, a combustor assembly 36 and a turbine assembly 44, the casing comprising: a fan case portion 12; an intermediate case portion 12; and a gas generator case portion 16, wherein the fan case portion, the intermediate case portion and the gas generator case portion are integrally joined together by 14, thereby forming an integral casing; wherein the intermediate case portion further comprises an integral compressor shroud portion 16 and an integral bearing 84 mount 20, 22, 78 portion; wherein the bearing mount portion is configured to inherently provide integral damping to a shaft bearing; wherein the fan case portion, the intermediate case portion and the gas generator case portion are joined together by flangeless connections. For claim 5, the individual fan case portion, the intermediate case portion and the gas generator case portion are *fabricated individually and welded together* is a product by process limitation. It is noted that the patentability of these claims is determined on the basis of the product formed and not the method by which it is produced *Ex parte Junger*, 18 USPQ2d 1796 (BPAI 1991). "Patentability of claim to apparatus does not rest merely on difference in method by which apparatus operates or produces product; rather, it is apparatus itself that must be new and unobvious; however, if claim contains structural limitations sufficient to distinguish claim from prior art and meet novelty and nonobviousness requirements, addition of further process limitations does not preclude patentability."

A bypass turbofan engine comprising: at least a fan 92, a compressor 28, and a gas generator (includes 36) disposed in flow series within the engine, and a bypass airflow (via 92 and 14) defined around at least the compressor 28 and gas generator 36; and a one-piece casing 12, 16, 22 substantially encasing the fan, compressor and gas generator; wherein the casing further comprises an integral compressor shroud 16 encircling blade tips of the compressor; 28 the casing further comprises an integral bearing seat 20, 22, 78 for directly mounting a compressor shaft bearing 84 to the casing; wherein bearing seat is inherently configured to provide integral damping to the compressor shaft bearing; wherein the casing at least partially defines a by-pass air flow passage (via 92 and 14) within the engine. A turbofan engine for an aircraft comprising: a rotating assembly including a propulsive fan portion 92, a compressor portion 28, and a gas generator portion (includes 36), the rotating assembly having an axial length; and a generally tubular casing assembly enveloping the rotating assembly substantially along the axial length thereof and thereby defining a main flow path through the engine, wherein the casing assembly is an integrated single piece 12, 14, 16, 50; wherein the casing assembly further comprises a integral shroud section encircling a plurality of compressor blade tips of the compressor portion 28; wherein the casing assembly further comprises a integral bearing seat 20, 22, 78 for operatively supporting a compressor shaft of the compressor portion; wherein the casing defines at least a portion of a by-pass air duct of the engine. Cronstedt clearly illustrates the fan case 12 and the intermediate fan case 12 are integral. Lowrie is cited to provide extrinsic evidence to join the fan case sections 18, 20, 24

integrally by welding or by a bolted connection (col. 2, lines 53+). Hence, the evidence makes plain that integral constructions for the fan case are known and an illustration of an integral fan case should be taken at face value as integral. Similarly, Chaplin et al shows that the struts 52 are integral with the fan case 28 and the gas generator case and thus form an integral assembly (col. 4, lines 5-9). Consequently, an illustration of an fan case and gas generator integrally joined by struts to form an integral assembly should be taken at face value as integral. Note that MPEP 2123 sets forth:

I. < PATENTS ARE RELEVANT AS PRIOR ART FOR ALL THEY CONTAIN

"The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989). See also *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998) (The court held that the prior art anticipated the claims even though it taught away from the claimed invention. "The fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed.").

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5. Claims 1, 2, 12, 13, 15 are rejected under 35 U.S.C. 102(a or e) as being anticipated by Springer (6,532,731). Springer teaches a casing for a turbofan engine, the engine including at least a fan assembly 66a, a compressor assembly 46, a combustor assembly 47 and a turbine assembly 48, the casing comprising: a fan case portion; an

intermediate case portion; and a gas generator case portion, wherein the fan case portion, the intermediate case portion and the gas generator case portion are integrally joined together 42, thereby forming an integral casing 42, a turbofan engine for an aircraft comprising: a rotating assembly including a propulsive fan portion 66a, a compressor portion 46, and a gas generator portion 47, the rotating assembly having an axial length; and a generally tubular casing 42 assembly enveloping the rotating assembly substantially along the axial length thereof and thereby defining a main flow path through the engine, wherein the casing assembly 48 is an integrated single piece of the same material. The casing assembly further comprises a integral shroud section encircling a plurality of compressor blade tips of the compressor portion. Springer clearly illustrates the fan case 12 and the intermediate fan case 12 are integral. Lowrie is cited to provide extrinsic evidence to join the fan case sections 18, 20, 24 integrally by welding or by a bolted connection (col. 2, lines 53+). Hence, the evidence makes plain that integral constructions for the fan case are known and an illustration of an integral fan case should be taken at face value as integral. Note that MPEP 2123 sets forth:

I. < PATENTS ARE RELEVANT AS PRIOR ART FOR ALL THEY CONTAIN

"The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989). See also

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Celeritas Technologies Ltd. v. Rockwell International Corp., 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998) (The court held that the prior art anticipated the claims even though it taught away from the claimed invention. "The fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed.").

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6. Claims 1, 5, 7, 8, 11-13, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Stuart (4,790,133). Stuart teaches a casing for a turbofan engine, the engine including at least a fan assembly 62, a compressor assembly 18, a combustor assembly 16 and a turbine assembly 22, the casing comprising: a fan case portion 54; an intermediate case portion 54; and a gas generator case portion 14, wherein the fan case portion, the intermediate case portion and the gas generator case portion appear integrally joined together, thereby forming an integral casing, a bypass turbofan engine comprising: at least a fan 62, a compressor 18, and a gas generator 16 disposed in flow series within the engine, and a bypass airflow defined around at least the compressor 16 and gas generator 16; and what appears to be a one-piece casing substantially encasing the fan, compressor and gas generator; a turbofan engine for an aircraft comprising: a rotating assembly including a propulsive fan portion 62, a compressor portion 18, and a gas generator portion 16, the rotating assembly having an axial length; and a generally tubular casing assembly 54, 14 enveloping the rotating assembly substantially along the axial length thereof and thereby defining a main flow path through the engine, wherein the casing assembly 54 and 14 are each a single piece. Lowrie is cited to provide extrinsic evidence to join the fan case sections 18, 20, 24 integrally by welding or by a

bolted connection (col. 2, lines 53+). Hence, the evidence makes plain that integral constructions for the fan case are known and an illustration of an integral fan case should be taken at face value as integral. Similarly, Chaplin et al shows that the struts 52 are integral with the fan case 28 and the gas generator case and thus form an integral assembly (col. 4, lines 5-9). Consequently, an illustration of an fan case and gas generator integrally joined by struts to form an integral assembly should be taken at face value as integral. Note that MPEP 2123 sets forth:

I. < PATENTS ARE RELEVANT AS PRIOR ART FOR ALL THEY CONTAIN

"The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989). See also *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998) (The court held that the prior art anticipated the claims even though it taught away from the claimed invention. "The fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed.").

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Cronstedt (3,814,549) in view of Lowrie (4,122,672) and optionally Chaplin (3,814,549). Cronstedt teaches various aspects of the claimed invention including an illustrated integral assembly of the fan case with the intermediate fan case and the integral joining of the fan case to the gas generator case via the struts 16. In order to obviate any doubt, Lowrie is cited to show that it is old and well known in the art to join multiple pieces of the fan case and join them integrally by welding is equivalent to their joining by bolting. It would have been obvious to one of ordinary skill in the art to make the fan case integral by welding, as taught by Lowrie, as the conventional practice and/or equivalent construction technique known in the art. It would further been obvious to replace any other flanged bolted connections in Cronstedt by welding, as being taught as equivalent by Lowrie, in order to employ an equivalent construction known in the art. Cronstedt further teaches that the struts 20 are integral with 18 and 22 (col. 1, lines 52+), hence, it would also have been obvious to one of ordinary skill in the art to make the struts 14 integral with the fan and gas generator casing, as taught by Cronstedt, to facilitate a stronger assembly or to reduce parts inventory. Optionally, Chaplin specifically teaches that it is known to make the struts 52 are integral with the fan case 28 and the gas generator case and thus form an integral assembly (col. 4, lines 5-9). It would have been obvious to one of ordinary skill in the art to make the struts integral

with the fan case and the gas generator case, as taught by Chaplin, in order to facilitate a stronger assembly or to reduce parts inventory. As for making the fan case portion, the intermediate case portion and the gas generator case portion are made of the same material, it would have been obvious to make them out of the same material in order to facilitate ease of welding and/or ease of manufacture and/or reduction of and/or for consistency in thermal expansion properties.

9. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Romani (6,145,300) in view of Lowrie (4,122,672) and optionally Chaplin (3,814,549). Romani teaches a casing for a turbofan engine, the engine including at least a fan assembly 30, a compressor assembly 31, 7, a combustor assembly (not illustrated but present) and a turbine assembly (not illustrated), the casing comprising: a fan case portion 21; an intermediate case portion 1; and a gas generator case portion 2 and 24, wherein the intermediate case portion 1 and the upstream gas generator case portion 2 are integrally joined together by casting, thereby forming an integral casing; wherein the intermediate case portion further comprises an integral compressor shroud portion 3 and an integral bearing mount portion 4; wherein the bearing mount portion is configured to provide integral damping to a shaft bearing 16.. A bypass turbofan engine comprising: at least a fan 30, a compressor 31, and a gas generator (includes the combustor) disposed in flow series within the engine, and a bypass airflow (outside 3) defined around at least the compressor and gas generator; and a one-piece casing 1 substantially encasing the fan, compressor and gas generator; wherein the casing further comprises an integral

compressor shroud 2 encircling blade tips of the compressor; the casing further comprises an integral bearing seat 4 for directly mounting a compressor shaft bearing 16 to the casing; wherein bearing seat is configured to provide integral damping to the compressor shaft bearing; wherein the casing at least partially defines a by-pass air flow passage within the engine. A turbofan engine for an aircraft comprising: a rotating assembly including a propulsive fan portion 30, a compressor portion 31, and a gas generator portion, the rotating assembly having an axial length; and a generally tubular casing assembly enveloping the rotating assembly substantially along the axial length thereof and thereby defining a main flow path through the engine. Romani does not teach the fan case portion 21 is integral with intermediate fan case 1 showing a bolted connection between 14 and 21 nor the downstream gas generator casing 24 is integral with the upstream gas generator casing 3 showing this is bolted at 23. Lowrie is cited to show that it is old and well known in the art to join multiple pieces of the fan case and join them integrally by welding is equivalent to their joining by bolting. It would have been obvious to one of ordinary skill in the art to make the fan case integral by welding, as taught by Lowrie, as the conventional practice and/or equivalent construction technique known in the art. It would further been obvious to replace any other flanged bolted connections joining the gas generator case (e.g. 23) by welding, as being taught as equivalent by Lowrie, in order to employ an equivalent construction known in the art. By replacing the bolted connections with welded connections, the casing becomes a one-piece integral casing as a portion of the fan case, gas generator case, engine core and

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stator blades are all integral already (col. 2, lines 4+). As for making the fan case portion, the intermediate case portion and the gas generator case portion are made of the same material, it would have been obvious to make them out of the same material in order to facilitate ease of welding and/or ease of manufacture and/or reduction of and/or for consistency in thermal expansion properties.

10. Claims 1, 2, 5, 7, 8, 11, 12, 13, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stuart (4,790,133) in view of Lowrie (4,122,672) and optionally Chaplin et al (4,722,184). Stuart teaches a casing for a turbofan engine, the engine including at least a fan assembly 62, a compressor assembly 18, a combustor assembly 16 and a turbine assembly 22, the casing comprising: a fan case portion 54; an intermediate case portion 54; and a gas generator case portion 14, wherein the fan case portion, the intermediate case portion and the gas generator case portion appear integrally joined together, thereby forming an integral casing, a bypass turbofan engine comprising: at least a fan 62, a compressor 18, and a gas generator 16 disposed in flow series within the engine, and a bypass airflow defined around at least the compressor 16 and gas generator 16; and what appears to be a one-piece casing substantially encasing the fan, compressor and gas generator; a turbofan engine for an aircraft comprising: a rotating assembly including a propulsive fan portion 62, a compressor portion 18, and a gas generator portion 16, the rotating assembly having an axial length; and a generally tubular casing assembly 54, 14 enveloping the rotating assembly

substantially along the axial length thereof and thereby defining a main flow path through the engine, wherein the casing assembly 54 and 14 are illustrates each a single piece. However, to obviate any doubt, Lowrie is cited to show that it is old and well known in the art to join multiple pieces of the fan case and join them integrally by welding is equivalent to their joining by bolting. It would have been obvious to one of ordinary skill in the art to make the fan case integral by welding, as taught by Lowrie, as the conventional practice and/or equivalent construction technique known in the art. It would further been obvious to replace any other flanged bolted connections joining the gas generator case (e.g. 23) by welding, as being taught as equivalent by Lowrie, in order to employ an equivalent construction known in the art. By replacing the bolted connections with welded connections, the casing is an integrated single piece. Optionally, Chaplin specifically teaches that it is known to make the struts 52 are integral with the fan case 28 and the gas generator case and thus form an integral assembly (col. 4, lines 5-9). It would have been obvious to one of ordinary skill in the art to make the struts integral with the fan case and the gas generator case, as taught by Chaplin, in order to facilitate a stronger assembly or to reduce parts inventory. Hence, with struts integral with the fan and gas generator casing as well as the fan casing and gas generator casing being integral by e.g. welding, the overall assembly comprises a one-piece integral assembly. As for making the fan case portion, the intermediate case portion and the gas generator case portion are made

of the same material, it would have been obvious to make them out of the same material in order to facilitate ease of welding and/or ease of manufacture and/or reduction of and/or for consistency in thermal expansion properties.

11. Claims 1, 2, 5-7, 11-13, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Udall et al (5,409,184) in view of Lowrie (4,122,672). Udall et al teach a casing for a turbofan engine, the engine including at least a fan assembly 12, a compressor assembly 24, a combustor assembly 28 and a turbine assembly 30, the casing comprising: a fan case portion 18; an intermediate case portion 18; and a gas generator case portion 14, wherein the fan case portion, the intermediate case portion and the gas generator case portion are shown in sections and appear to be integrally joined together, thereby forming an integral casing, a bypass turbofan engine comprising: at least a fan, a compressor, and a gas generator disposed in flow series within the engine, and a bypass airflow defined around at least the compressor and gas generator; and what appears to be a one-piece casing 18, 14 substantially encasing the fan, compressor and gas generator; a turbofan engine for an aircraft comprising: a rotating assembly including a propulsive fan portion, a compressor portion, and a gas generator portion, the rotating assembly having an axial length; and a generally tubular casing assembly enveloping the rotating assembly substantially along the axial length thereof and thereby defining a main flow path through the engine, wherein the casing assembly appears to be an integrated single piece 18, 14. Udall specifically teaches the casing portions 18

and 14 are integrally joined by the frame (col. 4, lines 1+). Udall does not specifically teach the portions of the core engine shroud 14 (compressor, combustor/gas generator) are integrally joined. However, integrally joining is well known in the art as suggested by Lowrie, who teaches it is well known to join multiple pieces of the fan case and join them integrally by welding is equivalent to their joining by bolting. It would have been obvious to one of ordinary skill in the art to make the fan case integral by welding, as taught by Lowrie, as the conventional practice and/or equivalent construction technique known in the art. It would further been obvious to replace any other flanged bolted connections joining the gas generator case (e.g. 23) by welding, as being taught as equivalent by Lowrie, in order to employ an equivalent construction known in the art. As for making the fan case portion, the intermediate case portion and the gas generator case portion are made of the same material, it would have been obvious to make them out of the same material in order to facilitate ease of welding and/or ease of manufacture and/or reduction of and/or for consistency in thermal expansion properties.

12. Claims 3, 4, 9, 10, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over either the Udall et al (5,409,184) combination or the Stuart (4,790,133) combination, as applied above, and further in view of Allen et al (6,109,022). The prior art do not teach an integral bearing mount portion configured to provide integral damping to a shaft bearing. Allen et al teach an

integral bearing mount portion 29, 36, 38 configured to provide integral damping via resilient member 36 to a shaft bearing 40. Allen specifically teaches making portions of 36, i.e. 45 and 34 either unitary or separate items (col. 3, lines 46+). Hence, this is teaching of the equivalence of making unitary/integral or separate. It would have been obvious to make the entire bearing mount portion integral/unitary as being within the ordinary skill in the art for simplification and/or as an equivalent structure.

Response to Arguments

13. Applicant's arguments, filed in the appeal brief of 12/22/2006, have been fully considered. The arguments hinge upon the argument two related points 1) that the drawings are schematics and thus the engine case design for schematics should be interpreted as being conventional and 2) the multi-piece engine cases are often depicted schematically in a manner similar to the Figures of Springer, Stuart and Udall et al. Applicant's point is well understood and to address this point, Lowrie is cited which shows that it is well known to make the multi-piece engine case either bolted or welded into an integral assembly. Hence, it is quite clear that schematics of other references should be interpreted as what is conventional, i.e. of making the engine cases either integral by welding or bolted is clearly conventional.

Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ted Kim whose telephone number is 571-272-4829. The

Examiner can be reached on regular business hours before 5:00 pm, Monday to Thursday and every other Friday.


The fax number for the organization where this application is assigned is
571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg, can be reached at 571-272-4828. Alternate inquiries to Technology Center 3700 can be made via 571-272-3700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). General inquiries can also be directed to the Patents Assistance Center whose telephone number is 800-786-9199. Furthermore, a variety of online resources are available at <http://www.uspto.gov/main/patents.htm>



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